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The dentition in all the specimens is the same, and agrees with that assigned to the genus; the canines in the adult are, however, slightly larger than in the younger one. No other points, throughout the whole skeleton, of sufficient importance to call for observation, present themselves. I think, however, that my readers, from what I have said, will agree with me in saying, that it is at least most probable that the young of the Common Marten has been mistaken for a distinct species, and that no such animal as the Pine Marten exists in the British Isles.

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This, I think, proves the necessity of being very careful in the admission of measurements as distinctive marks of species, unless the limit of variation in each species is to a certain extent ascertained.

XXXIV.—*On the Occurrence of two Species of Shells of the Genus Conus in the Lias, or Inferior Oolite, near Caen in Normandy.* By C. LYELL, Esq., F.R.S., F.G.S., &c.

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Although fossil shells belonging to Lamarck's family of the *Enroulés* are sufficiently abundant in the tertiary strata, a very few examples have yet been recorded of the occurrence of any of these shells in any of the more ancient fossiliferous rocks. The *Enroulés* of Lamarck comprise the genera *Ovula*, *Cypræa*, *Terebellum*, *Ancillaria*, *Oliva*, and *Conus*. Of these, the only examples known to me in secondary formations, are a species of *Cypræa*, which I have mentioned and figured in the Geol. Trans. (2nd Series, vol. v. p. 243.) as occurring in the upper chalk of Faxoe in Denmark, and a Cone called *C. tuberculatus*, of which a single specimen was found by M. Dujardin in the chalk near Tours, of which he has given a figure in les Mém. de la Soc. Géol. de France, tom. ii. deuxième partie, 1837. Plate 17. p. 232.

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In order to satisfy myself of the correctness of the alleged geological position of these Cones, I visited in June, 1840, Fontaine-Etoupe-four in company with M. Deslongchamps, and ascertained to my full satisfaction that the rock from which the Cones had been extracted was full of *Ammonites*, *Pleurotomaria*, and other fossils, which must belong either to some member of the inferior oolite or upper lias.

The fundamental rock consists of highly inclined vertical, and in some places curved, beds of reddish and white quartzite, alternating with greenish talcose schists. Upon these ancient rocks the brown fossiliferous limestone rests unconformably and in horizontal stratification. At many points are seen at the contact deep rents traversing the inferior quartzose

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Among the Ammonites which I collected myself in the rent or in the bed immediately covering it, or which were given me from this locality by M. Deslongchamps, were the following, which have been examined by my friend Mr. Lonsdale, of the Geological Society:—

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It may be objected that the mineral character and colour both of the breccia filling the rent and of the overlying beds differ totally from those of ordinary lias, for the rock is a pale brown ferruginous limestone. But Mr. Lonsdale informs me that near Radstock the great deposit of blue lias is represented by only a few feet of a pale brown granular rock, so like inferior oolite that the quarry men apply the same name to it. But this gritty lias is clearly not inferior oolite, being separated from that rock by blue clay from 100 to 200 feet thick. (See Lonsdale, Geol. Trans., vol. iii. 2nd series, p. 245.) The "corn-grit" above-mentioned is a granular light brown limestone, but of a closer and finer grain than the gritty lias. Yet Radstock is only seven miles S.W. from Bath, where the lias is well-developed, with its usual characters.

In proceeding from Caen to Fontaine-Etoupe-four the geologist obtains no sections which display the superposition of the different members of the oolitic series, but he finds the white oolite of Caen give place to the ferruginous oolite of Eterville, which resembles in appearance the oolite of Dundry. Travelling still further south he meets with the beds of Fontaine-Etoupe-four already described. As all these formations appear to be everywhere horizontal, and the surface of the country, following the direction above-described, is constantly attaining a higher level, we might naturally have expected to reach newer instead of older beds. But it must be remembered, that a slight dip, and one quite inappreciable in the space of a quarry, as for example, an angle of five degrees, might in a distance of six miles cause a difference of level of more than 800 feet, so as to allow beds which may be concealed beneath the oolite building-stone at Caen to crop out in a high platform at Fontaine-Etoupe-four.

Having offered these remarks on the position and age of the containing rock, I shall now describe the Cones themselves, in which task I have had the assistance of Mr. George Sowerby, who examined the original specimens at my request during a late visit to Normandy.

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I am indebted to the liberality of M. Deslongchamps for the principal drawings.

*Conus cadonensis*. Shell smooth, slender, with six or seven volutions and an acuminate spire, posterior edge of each volution carinated, and slightly crenulated. Posterior part of each volution rather concave, and very finely longitudinally striated.

Fig. 1.

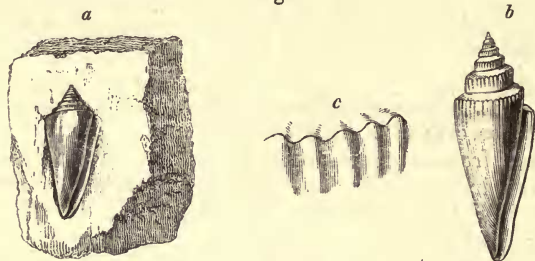


Fig. 1. *a*. represents an internal cast of a variety with a shorter spire. This cast is still imbedded in the limestone in which it was found. It is regarded as a mere variety of *b*, because it is well known that in this genus the height of the spire differs greatly in the same species, as for example, in *Conus antediluvianus*, to which *C. cadonensis* approaches most nearly.

Fig. 1. *b*. A perfect specimen of *Conus cadonensis*, in the possession of M. Tesson, in which the entire shell is extant.

Fig. 1. *c*. A magnified representation of a part of the crenulated posterior edge of one volution of *C. cadonensis*.

*Conus concavus*. Shell smooth, conical, contracted near the middle, with a concave depressed spire, consisting of nine volutions, each volution carinated at the external edge, and very slightly longitudinally striated.

Fig. 2.

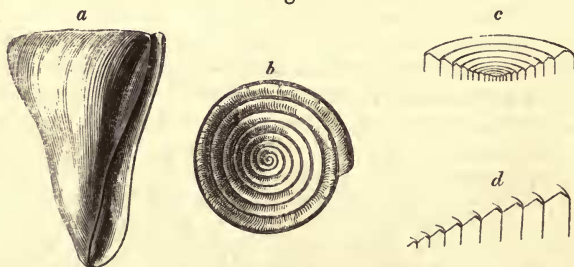


Fig. 2. *a*. A perfect specimen of *Conus concavus* in the possession of M. Tesson, from a drawing by M. Deslongchamps. In this specimen the shell itself is extant.

Fig. 2. *b*. represents the concave spire of the same.

Fig. 2. *c*. is a section of the spire, showing the depth of the concavity.

Fig. 2. *d*. A magnified section of a portion of the same, showing the form of the volutions.

I am indebted to the liberality of M. Deslongchamps for the principal drawings.

*Conus cadonensis*. Shell smooth, slender, with six or seven volutions and an acuminate spire, posterior edge of each volution carinated, and slightly crenulated. Posterior part of each volution rather concave, and very finely longitudinally striated.

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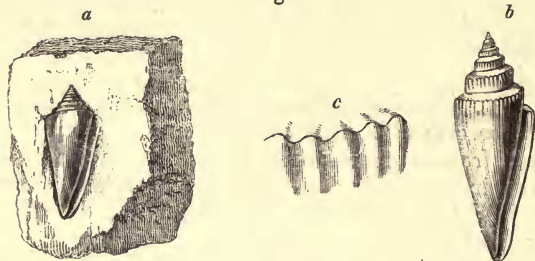


Fig. 1. *a*. represents an internal cast of a variety with a shorter spire. This cast is still imbedded in the limestone in which it was found. It is regarded as a mere variety of *b*, because it is well known that in this genus the height of the spire differs greatly in the same species, as for example, in *Conus antediluvianus*, to which *C. cadonensis* approaches most nearly.

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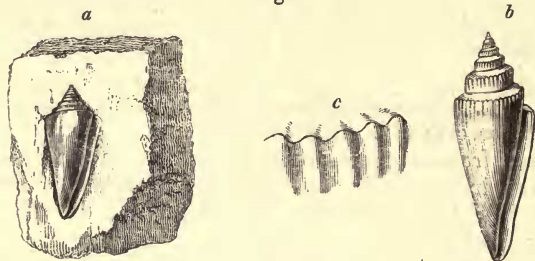


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